UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

MEMORANDUM:

To: Jacquelyn Marchese

From: Eric Bohnenblust, Ph.D., Entomologist

Secondary Review: Pesticide Efficacy Review Committee

Date: July 28, 2015

Subject: PRODUCT PERFORMANCE DATA EVALUATION RECORD (DER)

THIS DER DOES NOT CONTAIN CONFIDENTIAL BUSINESS INFORMATION

Note: MRIDs found to be **unacceptable** to support label claims should be removed from the data matrix.

DP barcode: 428249, 428251
Decision no.: 502983, 502984
Submission no: 966432, 966433
Action code: R340, R340.1
Product Name: Derby, Tandem
EPA Reg. No or File Symbol: 100-1436, 100-1437
Formulation Type: liquid
Ingredients statement from the label with PC codes included:
Lambda-cyhalothrin 3.5% PC: 128897
Thiamethoxam 11.6% PC: 060109
Application rate(s) of product and each active ingredient (lbs. or gallons/1000 square feet or per acre as appropriate; and g/m^2 or mg/cm^2 or mg/kg body weight as appropriate): 0.13% dilution which is mixed using 1.1 fl. oz. (32 ml) product/gallon of water at an application rate of 1 gallon of dilution/1000 ft^2
Use Patterns: spot, crack and crevice, banded outdoor perimenter treatment

I. Action Requested: Because of a conflict between data presented in summary tables and a textual reference in the initial submission, kills scorpions and kills scorpions on porous surfaces were determined to be unsupported. In response, the registrant submitted a rebuttal to a previous efficacy review (DPs: 426952, 426954) and included raw data for review to address the discrepancy.

II. Background: Data previously reviewed (DPs: 404698, 404699) by the Agency were determined to adequately support a claim of kills scorpions on non-porous surfaces for EPA Reg. Nos 100-1436 and 100-1437. Claims of kills scorpions and kills scorpions on porous surfaces were not supported by the data. The registrant submitted additional data to support efficacy claims of kills scorpions and kills scorpions on porous and non-porous surfaces and because of conflicting information, claims of kills scorpions and kills scorpions on porous surfaces were not supported. The registrant submitted a rebuttal to a previous efficacy review (DPs: 426952, 426954) to reconcile the conflicting information.

Registrant Response: In reviewing the raw data submitted by Eurofins, Inc., for the study in question, it is clear that the statement of 50% mortality in the deviation was in error. The raw data sheet below shows that mortality in

the pine wood surface treatment was 17 of 20 scorpions (85%) at day 3, 18 of 20 scorpions (90%) at day 7, and 20 of 20 scorpions at day 14. This matches what was presented in the summary table. Apparently, the error occurred in the original report written by Eurofins and sent to Sierra Labs, which was serving as the lead contract research organization. The error was flagged by Bill Donahue (Sierra Labs) during his editorial review of the report and was brought to the attention of Virna Saenz (Eurofins); in an e-mail to Eurofins, Mr. Donahue inquired whether the deviation was a 'cut-and-paste' mistake from another report. The deviation was found to be from another study, but the report was not corrected by either CRO.

EPA Response: In response to the information presented above, the Agency has reviewed the raw data for confirmation that the discrepancy pointed out in the previous review was an error. The resulting conclusions are addressed below in the MRID summary.

III. MRID Summary:

49557401. Lambda-cyhalothrin and Thiamethoxam (A18484A) – Summary of Data to Support Claim of Control of Scorpions with Tandem (Lambda-cyhalothrin + Thiamethoxam) Insecticide. - Raw Data.

(1) GLP

(2) **Methods:** This study compared residual efficacy against bark scorpions of the 0.13% rate of Tandem, 0.03% rate of Demand CS (EPA Reg. No. 100-1066; lambda-cyhalothrin), and Temprid SC EPA (Reg No. 432-1483; imidacloprid and beta-cyfluthrin) on unfinished pine boards and ceramic tiles. Treated and control substrates were stored overnight (approx. 24 h), after which scorpions were exposed to the surfaces for 1 hour. Mortality was assessed at 30 minutes, 1 hour, and 1, 3, 7, and 14 days post exposure.

(3) **Results:** The raw data confirm 100% mortality of scorpions at 14 days post exposure to the the 0.13% rate of Tandem applied to unfinished pine boards. Note 90% mortality of scorpions occurred at 7 days post exposure.

(4) **Conclusion: Acceptable**. With the submission of the raw data to confirm the discrepancy found in the previous review, this MRID supports claims of kills scorpions on porous and non-porous surfaces and kills scorpions using the 0.13% (1.1 fl. oz. product diluted in 1 gallon of water/1000 ft^2) application rate.

IV. EXECUTIVE DATA SUMMARY:

(A) This study supports claims of kills scorpions and kill scorpions on porous and non-porous surfaces using the 0.13% (1.1 fl. oz. product diluted in 1 gallon of water/1000 ft^2) application rate.

V. LABEL RECOMMENDATIONS:

(1) The following marketing claims are acceptable for both products:
Kills scorpions
Kills scorpions on porous surfaces
Kills scorpions on non-porous surfaces